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ABSTRACT

Egon G. Guba and Yvonna S. Lincoln were among the first to develop a set of extensive criteria for establishing naturalistic inquiry as a disciplined research methodology. The naturalistic paradigm--also called post-positivist, ethnographic, phenomenological, and qualitative--has gained acceptance as a legitimate alternative to the previously dominant positivist paradigm--also called empirical, analytical, scientific, rationalist, experimental, and quantitative. Guba's involvement in program evaluation and interest in an evaluation's stakeholders is related to his work in naturalistic inquiry. Naturalistic inquiry supports multiple concurrently existing realities, researcher involvement, and consideration of contextual factors. Guba developed four criteria for judging the rigor of naturalistic research: credibility; transferability; dependability or reliability; and confirmability or objectivity. Lincoln and Guba subsequently developed the criteria of authenticity: (1) fairness; (2) ontological authentication or improved experience; (3) educative authentication, or increased understanding; (4) catalytic authentication--the facilitation and simulation of action; and (5) tactical authentication, the ability to act toward change. There is evidence that there is a shift toward use of the naturalistic paradigm in the future. A 35-item reference list concludes the document. (GDC)

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SYMPOSIUM: Paradigm Shifts in Educational Research--
The Dialectical Relationship between Researchers
and Scholarly Research

GUBA AS A VANGUARD OF NATURALISTIC INQUIRY: A HARBINGER OF THE FUTURE?

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ABSTRACT

Despite the dominance of positivist paradigm of inquiry in the academic disciplines, there has always been a fringe of discontent and trying out with alternative approaches. However, never before the challege to the dominant paradigm has been so strongly felt over the past two decades, as the proliferation of literature on this topic indicates. While in the past the alternative inquiry paradigm (known variously as postpositivist, naturalistic, ethnographic, phenomenological, qualitative, etc.) was variably dismissed as too subjective, unreliable, sloppy and soft, today naturalistic inquiry has gained acceptance as a legitimate option as well as an alternative to the dominant paradigm. Whether the new paradigm practitioners and theorists will become the harbingers of the future or they will only be remembered as a mere protest against the status quo depends on a number of factors. These include the continued propagation of the new paradigm, the struggle to loosen the hold of the dominant paradigm on the power structure in order to win the freedom and resources to conduct inquiry in the new paradigm and the socialization of the younger generations into the new thinking. Egon Guba is among the first to develop a set of extensive and detailed criteria for establishing naturalistic inquiry as a disciplined inquiry. This paper critically evaluates the contributions of Guba in the somewhat evengelistic mission of promoting the paradigm shift, delienates the fundamental assumptions and principles that model naturalistic inquiry, and discusses the contraints and problems of the continuing development of the new paradigm.

GUBA AS A VANGUARD OF NATURALISTIC INQUIRY: A HARBINGER OF THE FUTURE?

How should research be conducted? Where does one begin? What guidelines and criteria need to be brought to bear to ensure that scholarly quality research is carried out? How should research questions be formulated? Which methodologies are appropriate and which are not? These are fundamental questions with which young educational researchers are brought face to face in the process of being socialized into the academic circle. For many of us, these questions appear straight-forward and obvious--in the manner of 'it goes without saying'. Yet upon further examination, these questions require much more thought than one would expect.

Inquiry Paradigms

The classic work of Kuhn (1970) has made it clear that researchers conduct their inquiries within a framework of characteristic assumptions. Kuhn refers to this integrated set of assumptions that lead researchers to 'see' the world in a particular way as a 'paradigm'. Often the paradigm is an implicit, unvoiced and pervasive commitment by a community of scholars to a conceptual framework. Each framework has particular constellations of questions, methods and procedures, which provide shared ways of 'seeing' the world. Being socialized into a particular paradigm involves more than just learning the exemplars of the field. It also involves learning to 'see',

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It should be noted that many of the ideas relating to the naturalistic inquiry paradigm are the fruitful result of Egon Guba's collaboration with Yvonna S. Lincoln, whose name could for all practical purposes have replaced Guba's in this paper.

think about and act towards the world in a way consistent with the expectations, demands, attitudes, and other assumptions of the paradigm (Popkewitz, 1984). Practitioners who are committed to the same paradigm use similar metaphors and share the same styles of inquiry. The paradigm both defines what constitutes legitimate 'quality' studies as well as specifies what is to be excluded based on a set of criteria grounded in the paradigm.

Most of us have been socialized into educational research on a model borrowed from the natural science. This dominant positivist (also called the empirical-analytical, scientific, rationalist, experimental and/or quantitative) paradigm gives definition and structure to the contemporary practice of research. Because this paradigm of inquiry emphasizes the development of lawlike, context-free generalizations, and the search for causation and control, most contemporary graduate research programs tend to focus only on the procedural logic of research, making statistics and procedural pro-problems of paramount importance to the conduct of research. This leads to research being narrowly construed as a limited repertoire of technical activities that one needs only to be armed with in order to operate successfully in the academic world.

The need to maintain and develop standards or quality control is an essential aspect of scholarly inquiry. For years, however, criteria grounded in the positivist paradigm (see for example, the classic work of Campbell & Stanley, 1963) have been used to judge the quality of all inquiry. As a result, many quality studies which are grounded in alternative paradigms (e.g. field or case study,

ethnography) have been variably labelled as subjective, unreliable, sloppy and soft. For example, the work of Dunkin & Biddle (1968) entitled The Study of Teaching explicitly excluded all studies that do not employ quantifiable measures of process and product from their review of research. Shulman (1986) noted the irony that, as a result, the work of Jackson (1968) entitled Life in Classrooms was left out even though it is among the most frequently cited references in their conceptual analysis of teaching. The appropriateness and fairness of applying positivist criteria to judge inquiry grounded in an alternative paradigm which has diametrically different undergirding assumptions were called into question by scholars (Morgan, 1983).

Legitimation of Alternative Paradigms

Despite the dominance of the positivist paradigm of inquiry in social (including educational) research, there has always been a fringe of discontent and trying out with alternative approaches, focussing on still other sets of assumptions and formulations. Challenges to the dominant paradigm may be noted to as early as the 18th century (Popkewitz, 1981; Erickson, 1986). However, the challenge has been especially strongly felt over the past decades, as the proliferation of debates at professional conventions and in research journals, notably those sponsored by AERA, indicates. The debates evolve around the nature, purpose and underlying assumptions of social inquiry as various intellectual traditions reflecting alternative and/or diametrically opposed assumptions compete to establish standard of inquiry and to secure legitimation. Included in the alternative paradigms that pose serious challenge to the dominant

positivist paradigm are studies based on ethnography, phenomenology and case study.

The challenges to positivism have received an adequate hearing only recently, gaining acceptace as a legitimate option under the name of 'qualitative' research. This is reflected in AERA's Handbook of Research in Teaching (3rd Ed., Wittrock, 1986) which began its chapters by setting the tone for legitimizing qualitative research and with Shulman (1986) calling for 'disciplined eclecticism' in the approach to educational inquiry. For the first time, a new chapter on qualitative research (Erickson, 1986) has been included in the Handbook. At the AERA meeting at San Francisco in April 1986, a substantial number of papers presented were based on the alternative paradigm. There were talks that the Division D (Measurement and Research) even contemplates creating a co-chair for qualitative method in the division(8). More and more educational researchers are talking about the coexistence of different paradigms. Some distinguish the two opposing perspectives only at the level of methods (LeCompte & Goetz, 1982; Schwandt, 1984). Others feel that whatever differences may exist, they do not matter in the long run, and hence call for eclecticism (Cook & Reichardt, 1979; Patton, 1982; Miles & Huberman, 1984). (These developments, although encouraging, represent attempts to blurr the basic difference between the two perspectives, reducing the debate to the issue of methods and techniques, thus ignoring the values and commitments underpinning educational research. Interested readers wishing to pursue this issue may refer to current writings, e.g., Smith & Heshusius, 1986 and Guba & Lincoln, 1986a.)

The challenge to the dominant paradigm is nothing new. Eniste-

mological challenges to positivist paradigm have been persuasively argued in previous decades. Why is it that these challeges are only receiving an adequate hearing now?

First of all, the internal discourse of science within positivism itself generates a search for alternatives when the paradim cannot adequately deal with many questions and discrepancies that have cropped up. The debate on productivity--or better put, the lack of productivity in educational research as noted in Kerlinger's (1977) AERA presidential address is a case at point. As two British researchers (Delamont & Hamilton, 1976) put it, '(w)hile results have grown to voluminous proportions, their contribution to understanding has been disproportionately small' (p.5). Second, and from a different perspective, Popkewitz (1981) points out that the current emergence of the alternative paradigm needs to be considered in relation to certain historical strains between cultural tradition and the technological structure of society. He contends that '(f)ield-based research contains underlying themes of community, pluralism, and negotiations which provide a symbolic form that appears to resolve perceived contradictions between institutional processes and social ideas' (p.155).

While these contextual factors are important to the legitimation of the alternative paradigm, the contributions of those in the vanguard of the new paradigm are also critical. Many of them still persist on the scholarly traditions of challenging the dominant paradigm with new vitality and faith, despite being previously judged irrelevant by practitioners of the positivist paradigm. Many more

have also joined in the relentless struggle to loosen the hold of the dominant power structure in order to win freedom and resource to conduct inquiry in the alternate paradigm. Will the new paradigm vanguards and practitioners become the harbingers of the future or will they be only remembered as mere protest against the status quo in the history of educational research depends on a number of factors. The relentless propagation of the new paradigm, the socialization of the younger generations into the new paradigm, and the advancement of new ideas are likely to be some contributing factors.

Egon Guba (together with Yvonna Lincoln) is among the first who developed a set of extensive and detailed criteria for establishing naturalistic inquiry (which covers approaches such as field or case study, ethnography, phenomenology, etc.) as a disciplined inquiry. This paper critically evaluates the contributions of Guba in the promotion of the new paradigm, delineates the fundamental assumptions and principles that model naturalistic inquiry, and discusses the constraints and problems of the continuing development of the new paradigm.

Egon Guba

Egon G. Guba is presently professor of education at Indiana University, Bloomington. He holds the baccalaureate degree in mathematics and physics from Valparaiso University (1947), the master's degree in statistics and measurement from the University of Kansas (1950), and the doctorate in quantitative inquiry from the University of Chicago (1952). He has been a member of the faculty of the University of Chicago, the University of Kansas City, the Ohio

State University, and since 1966, Indiana University. Guba is widely known for his contribution to the theory of administrative staff relations (the Getzels-Guba nomothetic-idiographic model), to change process theory (the Clark-Guba model), and to the Context-Input-Process-Product (CIPP) model of evaluation developed at Ohio State University (Stufflebeam et al., 1971).

Guba is also a prolific writer in a variety of fields in education. His early writings were characterized by a positivist flair which he later chose to abandon and challenge. Why and how he has come to hold certain views about educational research is traceable to his involvement and interest in program evaluation.

The emergent field of program evaluation probably provides a good illustration of the dialectical relationship between the researcher and scholarly discourse in promoting paradigm shift. The short history of evaluation has been characterized by dramatic change (see for example, Stake, 1973; House, 1978; Stufflebeam & Webster, 1980; Cronbach et al., 1980, Guba & Lincoln, 1986). With its utilitarian focus, this newly emergent discipline of social auditing inevitably introduces ideological elements into practice. Indeed, because it involves members of a variety of stakeholding audiences, each representing different value stances and interests, program evaluation essentially serves a political agenda and often becomes a tool of political advocacy. It is not surprising that many radically new ideas were crystallized in the scholarly discourse occurring within the field of evaluation.

Until recently, evaluation practice has been guided almost

exclusively by the positivist paradigm of inquiry. While this paradigm has offered valuable perspectives to its practice, its incorporation into program evaluation also creates a set of dynamics for which the positivist paradigm was not developed. Experience has shown that in the face of the technical difficulties of trying to maintain the rigor of experimental control, designs much looser than the 'quasi-experimental' studies are abound. Rigorous criteria are almost never completely met. This inability to apply positivist criteria of rigor creates its own irony.

The methodological discourse within the positivist paradigm has led to a call for pluralism in evaluation methodologies. This results in a proliferation of responsive models that derived their metaphors from non-scientific fields, for example, illuminative evaluation (Parlett & Hamilton, 1972), responsive evaluation (Stake, 1975), judicial or adversarial evaluation (Wolf, 1979), connoisseurship evaluation (Eisner, 1979), and naturalistic evaluation (Guba & Lincoln, 1981).

It is not difficult to 'sense' the personal disillusion that led Guba to become disenchanted with the positivist paradigm of inquiry. When discrepancy between promise and practice abound, there is apparently something wrong somewhere. Being a theorist, thinker and prolific writer, the disenchantment fostered Guba's insight that challenging the dominant paradigm is not simply a matter of refining but to revise entirely. The opportunity to think about this problem came when Guba accepted an appointment as visiting scholar at the Center for the Study of Evaluation at University of California, Los Angeles in the Summer of 1977. This led to the publication of Towards

a Methodology of Naturalistic Inquiry in Educational Evaluation (Guba, 1978), which is the cornerstone of Guba's promotion of a paradigm shift towards the naturalistic paradigm. Together with Yvonna S. Lincoln, Guba subsequently co-authored a series of papers, books and monographs, delineating the assumptions underlying naturalistic inquiry and developing extensive criteria for judging the quality of naturalistic inquiry- with each new titles advancing new ideas as well as outdating many of their previous constructions(2).

Positivist & Naturalistic Paradigms: Basic Assumptions

Research is a complex process in which methodology and technique assume meaning and significance only in relation to the assumptions or axioms undergirding the following basic questions: What is the nature of reality (ontology)? What is the relationship of the investigator to what is investigated (epistemology)? and What is the appropriate way to carry out the investigation (methodology). Guba (1986) delineated the axiomatic differences between the positivist and the naturalistic paradigms in their work, the jist of which are summarized in Table 1.

Readers will note from Table 1 that the basic belief systems of the naturalistic inquiry paradigm are virtually the polar opposites of those that undergird the positivist paradigm. Stressing that the three belief systems--ontological, epistemological & methodological--are synergistically and mutually related to one another, Guba (1986) noted that 'once the ontological question (What is there that can be known?) is answered, the range of possibilities for answers to the epistemological question (What is the relationship of the knower to

the knowable?) is sharply constrained, and once the epistemological question is answered, the way in which the methodological question (How can the knower go about knowing?) can be answered is virtually dictated' (p.17).

POSITIVIST	NATURALISTIC
ONTOLOGY	
REALIST: There exists a single reality independent of any observer's interest in it, operates according to immutable natural laws, many of which are casual in form. Truth is defined as fact isomorphic with reality.	RELATIVIST: There exist multiple socially-constructed realities, ungoverned by any natural laws. Truth is defined as the most informed and sophisticated construct-ions(s) on which there is consensus among qualified critics.
EPISTEMOLOGY	
DUALIST, OBJECTIVIST: It is possible for an observer to exteriorize the reality studied, remaining detached from it and uninvolved in it.	MONIST, SUBJECTIVIST: The inquirer and the inquired-into are interlocked in such a way that the findings of investigation are the literal creation of the inquiry process. (This assertation acts to obliterate the ontology/ epistemology distinction.)
METHODOLOGY	
INTERVENTIONIST: The context is stripped of its contaminating (confounding) influences so that the inquiry can converge on truth, explaining nature as it really is, leading to the capability to predict and control.	HERMENEUTIC: The context is construed as giving meaning and existence to the inquired-into, the methodology involves a dialectic of iteration, analysis, critique, reiteration, reanalysis, and so on, leading to the emergence of a joint (combined emic/etic) understanding of a case.

Table 1: Positivist & Naturalist Belief Systems (Guba, 1986)

Because we have been so deeply socialized into the positivist paradigm, many of us tend to take things for granted, assuming the positivist belief systems to be literally true rather than problematic human constructions. Sometimes adherents of positivist paradigm are not even aware of the underlying assumptions, which are implicit and often unvoiced. That was precisely how they initially reacted when challenged, demanding that inquiry carried out in other paradigms also demonstrates meeting criteria such as reliability, internal and external validity and other related criteria. As has been shown (Morgan 1983) these criteria are grounded in the belief systems of the positivist paradigm and are not appropriate for judging inquiry carried out in alternative paradigms. This is especially so in the case where the belief systems of the alternative paradigms are polar opposites to those of the positivist. Nevertheless, this highlights the need to establish criteria grounded in the new paradigm for judging the quality of inquiry carried out in the alternative paradigm, a task subsequently undertaken by Guba (& Lincoln).

Criteria for Judging Quality

Research is a 'disciplined inquiry'. According to Cronbach & Suppes (1969), a disciplined inquiry 'has a texture that displays the raw materials entering into the argument and the logical processes by which they were compressed and rearranged to make the conclusion credible' (pp.15-16). Thus, the final report of a disciplined inquiry must be publicly confirmable, including the raw data, source of these data, the processes of tranforming the data into interpretations, conclusions, extrapolations and recommendations.

For positivist paradigm of inquiry, the axiomatic assumptions call for cause and effect, prediction, control and generalization. To qualify as a 'disciplined' inquiry, positivist paradigm requires exploring the truth value of the inquiry (internal validity), its applicability (generalizability), consistency (reliability) and its neutrality (objectivity). These four well-known criteria form the fundamental basis for testing the rigor of inquiry in the positivist paradigm.

Naturalistic inquiry can also qualify as a 'disciplined' inquiry though in this case, its underpinning assumptions call for different criteria. Given the knowledge void in the new paradigm about quality control in naturalistic inquiry, Guba's (1981) initial response was to developed a set of criteria that parallel those of the positivist, using these conventional criteria as analogs. It was a necessary first step, and a useful basis to begin with, considering that the positivist criteria were built upon centuries of experience. The four analogs to positivist criteria devised are: credibility (cf. internal validity), transferability (cf. external validity), deoendability (cf. reliability), and confirmability (cf. objectivity). These four analogs constitute the criteria of trustworthiness, a parallel to the term rigor in the positivist sense.(4)

Guba's parallel criteria has been criticized because, it is asserted, they are based on positivist assumptions, thus having the effect of blurring the philosophical distinctions between the two perspectives and creating the impression that 'the two approaches are variations in techniques within the same assumptive framework, to

reach the same goals and solve the same problems' (Smith & Heshusius, 1986, p.6). While this criticism may be legitimate (& will not be discussed here) the effort nevertheless represented a substantial advance in the development in the thinking of the naturalistic paradigm. It is an important and necessary step in advancing the legitimation of the naturalistic paradigm. Still these criteria cannot resolve fully the issue of quality in naturalistic paradigm since they deal with issues deemed to be paramount from the perspective of the positivist paradigm. Lincoln & Guba (1986) subsequently generated the criteria of authenticity on the assumptions of the naturalistic paradigm.

Briefly, authenticity criteria include (1) fairness, i.e. identifying, presenting, clarifying and honoring in a balanced way the various multiple constructions and value positions that exist in a given context; (2) ontological authentication, i.e., whether or not there is 'improvement in the individuals and group's conscious experiencing of the world', judged by whether or not persons achieve a more sophisticated or enriched appreciation of the context; (3) educative authentication, whereby participants achieve increased understanding of the constructions which surround them; (4) catalytic authentication, which is the facilitation and simulation of action; and (5) tactical authentication, or the ability to actually act toward change and to be empowered politically and educationally (Lincoln & Guba, 1986). These emergent criteria clearly require further explication.(=)

Past efforts in challenging the dominant paradigm have sometimes not been successful for historical and other reasons. However,

the lack of clearly defined criteria to establish quality in the alternative paradigm is also a contributing factor. Thus the establishment of a set of extensive criteria by Guba (& Lincoln) to judge the credibility of inquiry conducted in the naturalistic paradigm represents, perhaps, a most significant contribution to the advancement and legitimation of naturalistic inquiry in a field dominated by positivist thinking.

Paradigm Shift

Guba & Lincoln move into the naturalistic paradigm with the full conviction that a paradigm shift is occurring, and that the paradigm of the future is the naturalistic pradigm. Traceable to the work of Kuhn (1970), which contends that a paradigm shift is revolutionary in nature, they are convinved that the naturalistic paradigm is likely to replace positivism in all disciplines over the next decades.

But paradigm shift does not occur overnight. It is naive to expect that humankind's link from the consciousness of yesterday's beliefs, values and assumptions could be banished forever by a sudden bold stroke of transformation, no matter how swift it is. On the contrary, the process of change is slow, evolutionary and mutational, with ideas and methods being continually refined, revised and created. It is a cultural change--a change that deals with basic beliefs, assumotions and values. Efforts to institute cultural changes are often met with strong resistance. Moreover, years of domination by the positivist paradigm has resulted in the language and terms being couched in positivist values (e.g. reality, truth, causation, valid, reliable, etc.). The languages of positivism are human constructions

that reflect the assumptions, values and priorities undergirding the positivist paradigm. It is not uncommon that practitioners of the natralistic inqury often find themselves short of parallel terms in reporting the results of their inquiry. The emergence of a new set of terminologies that reflect the values of naturalistic paradigm is an expected and necessary outcome if the paradigm shift is to occur.

Nevertheless, evidence of paradigm shift and change occurring is there. Adherents of positivist paradigm, while anticipating changes, foresee the basic belief systems of the positivist paradigm to remain. To them, these changes are merely updated versions incorporating new alternatives. This is reflected in the renewed interest in qualitative research, distinguishing the change issue only at the level of methods (qualitative vs quantitative). The more radical views recognize philosophical differences between the paradigms but these views which come from many different origins (phenonmenology, symbolic interactionism, ethnography, case study, crtical theory, etc.) also exhibit much disagreements. There are apparently many different kinds of paradigm shifts in the offing, though a trend towards coordinating the different dialogues appears to be emerging too.

Educational researchers are likely to find themselves living with several 'ages' of paradigms simultaneously. Whether this co-existence situation will move in the direction intended by the new paradigm inquirers depend on a number of factors, the most important one being the ability of the new paradigms to demonstrate sufficient superiority over the positivistic paradigm so that the further use of positivistic inquiry is no longer justified. This is a formidable

task. Another important factor has to do with defining the boundaries of the new paradigm and establing criteria for quality. Researchers has expressed worries about unmanageable relativism that has been brought about by Kuhnian thinking (Phillips, 1981), especially the fear that it can lead to 'anything goes' kind of situation. As Allender (1986) puts it, 'the irony of a new paradigm is that the evidence for its validity is busy poking holes in the old paradigm to see (but somehow not see)' (p.184). The advantage naturalistic paradigm has over other new paradigms is that it has gone beyond the stage of merely 'poking holes' in the old paradigm. With boundaries defined and criteria established for quality, vanguards of naturalistic paradigm can look to the paradigm shift with greater confidence.

The continuous dynamic flux generated by the paradigm shifts is bound to worry many people. Paradigm shift also possesses dialectical quality that is characterized by negation and contradiction, which in the long run resolves the contradiction and establish new equilibrium The evolutionary notion of paradigm shift suggests that conflicts and disagreements are essential to the vitality of human inquiry as a creative endeavor. Interactions between different paradigms promotes imagination and creativity. Viewed in this context, the contributions of Guba (& Lincoln) are indeed significant.

Some Concluding Thoughts

Guba's work has clearly given an impression of calling for an either-or allegiance, particularly in insisting on a clear choice between positivist and naturalist paradigms to guide inquiry.

Similarly, impressions also abound that Guba does not believe in the value of statistics. Guba & Lincoln (1988) have, however, categorically denied this, contending that it is a misunderstood issue because their concern is to fight for the acceptance and legitimation of the new methodology. It appears that they need to take extreme position in order to get their voices heard. Nevertheless, in addressing the issue of evaluation, Guba (1986) notes that '(i)t would be patently absurd to suggest that evaluators whose paradigm of orientation is the conventional are limited to quantitative methods, or that evaluators whose paradigm of orientation is naturalistic are limited to qualitative methods' (p.14). What he argues for is that there can be no possible accommodation at the paradigmatic level.

The axiomatic assumption of multiple realities in the naturalistic paradigm poses a paradox. The insistence on the synergistic and mutually supportive relations among naturalistic axioms automatically cuts one off from using positivist methodology. Yet, the commitment to plurality of realities implies that one must also takes cognizance of the existence of differing perspectives, including the perspective of a singular reality. It thus follows from the plurality assumption that in some situations, the assumption of singular reality is more likely to be applicable than the assumption of multiple realities. (Of course, in many situations, the inquirer may not know for sure.) Remember, however, that the domination of the positivist paradigm is built upon the success in the scientific field. The history of science confirms the use of the predictive model (singular reality assumption) in many situations. Is not the use of positivist methodology in such situations equally legitimate?

How does one reconcile this with the either-or exclusion stance of naturalistic paradigm? Can this be construed as, in a way, a denial of its very own multiple realities assumption? Further more, the adherents of positivist paradigm have been criticized for claiming that their paradigm is equally applicable to both the human and the natural domains of inquiry. Guba & Lincoln also make similar claim that the naturalistic paradigm is equally applicable to both the two domains. How will the adherents of naturalistic paradigm answer this same parallel criticism (considering that naturalistic paradigm has emerged from the human domains of inquiry)?

I believe the logical stance to adopt is that the values of a methodology lie in its utility for performing in the arena in which one wishes to apply it. There are many different approaches to the study of educational phenonmena. According to Godel's (1962) theorem of incompleteness'[6]', the insights that can be generated by any one approach are at best partial and incomplete, since something somewhere must always remain undecided. Since different paradigms do provide particular insights into our human conditions, the researcher can gain much by reflecting on the nature and insights of the different approaches before engaging on a particular mode of research practice.

The naturalistic paradigm does provide a way of responding to new and emerging ideas. With plurality of perspectives as a necessary ingredient and by focusing upon negotiated actions and the specific discourse contained in interaction between researcher and context, the naturalistic paradigm provides a model to resolve the social

problem of detachment and objectivity that have so plagued the positivist paradigm. However, the practice of inquiry also needs to be related to the larger social, cultural, philosophical and political trends. In particular, the social role of the researcher must be made clear.

Indeed, the works of research can illuminate as well as obscure and deflect criticism. They can create possibilities as well as limit choice. Popkewitz (1984) pointed out that theory is useful to the extent that it can enlighten people about how they can change their lives and arrive at a new self-understanding that illuminates the relations of objective and objective conditions. Researchers then need to represent issues and dilemmas that people confront in the world, thus raising social consciousness. However, such a position is only implicit in the discussions of the hermeneutic process and the authenticity criteria in the naturalistic paradigm (Lincoln & Guba, 1986a).

Interesting enough, in developing the authenticity criteria, Lincoln & Guba (1986) noted the need to address ethical and ideological issues and hence to be conscious of the 'ideology-boundedness of public life and the enculturation processes that serve to empower some social groups and classes and to impoverish others' (p.83). For example, the focus on ethical and ideological issues has led them to incorporate the concepts of false consciousness and divided consciousness as part and parcel of the concept of ontological authentication. Thus, seeded in the assumptions undergirding naturalistic paradigm is the need to incorporate theories of context into the task

of inquiry and the neccesity to define problems as containing issues of social, philosophical and political implications. This probably brings the naturalistic paradigm closer to critical theory.

The naturalistic paradigm does encourage researcher to engage in a reflective style of research that is sensitive to the assumptions and implications of all aspects of the research process, and how these influence what is learned about the phenonmena being investigated. However, what is needed is the advancement of educational inquiry so as to be liberative as well as functional. The naturalistic paradigm has potential for reflectivity and self-criticism to move along this direction.

NOTES

(1) I am indebted to Dr. Egon Guba, whose critique of my final draft has helped clarify many of my thoughts and issues highlighted in this paper. I am particularly grateful to him for sharing with me his latest ideas on naturalistic inquiry.
(2) I attended the AERA Division D business meeting at San Francisco in April, 1986, where talks about the possibility of setting up a co-chair for qualitative method were abound. This did not materialize, however.
(3) Indeed, new ideas on naturalistic inquiry are changing, emerging and developing so fast that as soon as these ideas were published, many of them became outdated very quickly. Guba & Lincoln's text on Naturalistic Inquiry faced this same fate when it was published in 1985.
(4) See Guba & Lincoln (1985) and Lincoln & Guba (1986).
(5) As Lincoln & Guba (1986) noted, strategies or techniques for meeting and assuring the authenticity criteria largely remain to be devised. More detailed explications are needed to exapand and consolidate these criteria or even to develop new ones.
(6) This paradoxical theorem from mathematics states that all consistent formulations of number theory include undecidable propositions. Restated, it means that there exist no set of axioms that can deal with all propositions; some propositions will inevitably fall outside its purview, unless one starts with a set of inconsistent formulations. For a treatment on the implications of mathematics and physics theories for the study of human experience ..... refer to the article by Keutzer, C.S. (1984), The power of meaning: from quantum mechanics to synchrocity. Journal of Humanistic Psychology, 24(1),80-89.

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